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## ORIGINAL ARTICLES.

### THE CURE OF CATARACT WITHOUT OPERATION.[1]

BY ADOLF ALT, M.D., ST. LOUIS, MO.

WE are in the habit of considering this age as one especially favored in comparison with the preceding ones on account of its so called enlightenment and its progressed and ever-progressing education of the masses of the people. Yet, no day passes in which we are not, in spite of all this, brought forcibly in contact with the unchanged credulity, superstition, admiration for and seeking after the mysterious by the people which all enlightenment and knowledge do not seem able to dispel, which appear even to be ever on the increase. While these conditions prevail more or less in all branches of learning, no profession, perhaps, is as frequently made aware of their baneful reign than the medical profession. To try and fathom the depth of these depressing facts, to put the blame where it rightly belongs and to suggest remedies is not, however, the purpose of this paper. The old addage, that where there is much light there must be much shadow is, of course, the worst kind of an apology for consolation.

As far as *we* are herein concerned, the most pregnant result of these existing conditions is that quackery is ever and increasingly rampant and holds its hollow pumpkinhead erect and proud as if it was filled with gray cerebral substance to its very core.

[1]Read before the St Louis Medical Society, December 17, 1898.

All of you have seen in numerous journals and magazines the continued advertisements of the "absorption cure of cataract" adorned with glaring announcements and testimonials of its efficiency, especially by the clergy, the application of which evidently pays so well that rival institutions are already trying to rob the original one of its unjust gains. Probably all of you have within a few months past received a pamphlet with a title similar to the one of this paper, issued by a homœopathic drug firm of this city, in which we are assured that the instillation of the extract of cimifuga maritima has cured and will cure cataract. This is apparently proven by a large number of testimonials from unknown sources, names with the letters M. D. attached and others without them. Yet, with all their boasting this firm refuses to submit any of this fine product for scientific investigation. At best, it is only the revival of a dream which had an ephemeral existence some ten or twelve years ago.

There is an older quack method for the cure of cataract which is still practiced in this city by some spectacle venders with a stretchy conscience, that is, the selling of glasses which are guaranteed to cure cataract. Furthermore, there is Christian Science, which is neither Christian nor scientific, working in this field. Another competitor, for all I know, is that other thing which by the grace of our honorable and enlightened Governor has been duped a science, and like many a highway-robber of yore has thus been adorned with the golden spurs of honorable knighthood.

All of these methods, and a great many more of which I know nothing, promise a more or less speedy cure of cataract without operation. As bad as this is, we will be charitable and state that if the quacks could not really and truthfully now and then point to a case of cataract in which an imaginary or apparent improvement, or even a cure, has taken place while the patient was under this or the other one's care (and in spite of it), they could not possibly in such a manner hoodwink and lead by the nose an intelligent and enlightened public as *we* are, in particular, wont of considering the people of this our own country.

It is the object of this paper, then, to relate to you briefly what is scientifically known as regards the possibility of an mprovement or cure of cataract without operation and to

show you that there are such cases which these quacks may occasionally claim as their own, while better knowledge will show them to be Nature's cures. Of course, my remarks refer only to forms of real cataract, that is, intra-capsular opacity of the crystalline lens, and not to the various forms of corneal and other affections which are often erroneously called cataract by the ignorant.

In the consideration of these occurrences it is, however, well to state plainly, that in the vast majority of the cases a cataract once begun will, if the patient lives long enough, progress to total dimness of the lens and practically to blindness. This is the rule—every other ending, except the cure by over-ripening which we will detail later on, is a rare exception.

In the very first beginning of the formation of a cataract, or even at a later period, patients not infrequently become aware of an improvement in their vision. This occurs in people with a hypermetropic refraction with or without presbyopia and in myopes in which the presbyopia had outbalanced the myopia. Such patients find out that they can lay their glasses aside or can at least get along with weaker ones than they used to wear. This apparent improvement of the refractive condition of such eyes is probably due to a swelling and consequent increased convexity of the crystalline lens from imbibition with fluid from its surroundings. In this manner what may be called a lenticular myopia is produced and as long as this myopia nearly or exactly offsets the pre-existing hypermetropia or presbyopia, the patients think that their eyes are really getting stronger. Yet, the ophthalmoscope may show that their cataract is quietly progressing while they rejoice at their improved sight. Only, when the increasing lenticular myopia forces patients to wear concave glasses instead of their convex ones for distant vision, or when they have to use concave glasses for the distance, while formerly they could see well without any, the patients usually get conscious of the fact that there is something wrong with their eyes and they seek medical aid. Not only have I for many years considered such a change in the refraction as an indication of the coming on of a cataract, but this condition furnishes undoubtedly also the explanation for many a case of so-called second-sight.

In the development of almost every case of cortical cataract there comes a time when for another reason patients notice

an improvement in their already quite impaired vision. This is the very period that the spectacle venders and other quacks count upon in promising a cure of the cataract by the use of their wares. In such cases the patients themselves believe, that the remedies, whatever they are, are actually curing their eyes. The explanation of this improvement of vision during the progress of a cortical cataract lies in the fact that as long as the cataract has not reached a certain stage the opacities, forming more or less radius-like striæ, are very unequal in density and leave clearer spaces between them. The extremely irregular refraction of light passing through and between them caused thereby produces a very confusing image. When, however, this condition has progressed to one of more uniform dimness, although interfering materially with vision, it allows of a more uniform refraction of the light entering the eye and the picture received, though dim, is much less confusing. This condition, however, marks only a stage in the progress of the cataract and the apparent improvement is again lost and gives way to greater dimness of vision as the cataract advances.

However, all cataracts do not progress in the same ratio nor in the same manner. There are almost as many variations as there are cases. It is, therefore, impossible and consequently very impolitic for the physician to even approximately predict the time when a given cataract will be complete enough to be called ripe and ready for operation. The time from the beginning to the full ripeness may extend from a few days (as in traumatic cases) to many years. I know patients who are afflicted with cataracts in whom I have observed no progress of the opacity or but very little in many years, in one case for twelve years. Allport (AMERICAN JOURNAL OF OPHTHALMOLOGY, February, 1896) reported a case in which no progress had been observed even for about twenty-five years.

In the cases just mentioned no form of treatment has been attempted with the direct aim of retarding the progress of the cataracts. If, however, cataract is, as by many it is thought to be, the result of malnutrition, then a trial to influence its progress by means of appropriate methods of treatment in order to remedy the existent general ill-health of the body and the malnutrition of the eye especially, is not only justified, but even demanded. Some sixteen years ago these considerations led M. Landesberg, then of Philadelphia, who believed that

cataract was due to some choroidal disease, to try whether the nasal forms of treatment for choroiditis would not also beneficially influence the resulting cataracts. What he expected, evidently occurred, for he was enabled in a short time to report a series of cases in which such treatment had improved and even cured incipient cataracts. I have tried the same procedures quite a number of times and have repeatedly had occasion to treat patients who had an evident choroiditis and incipient cataract at the same time, but in most cases, while the choroidal trouble became stationary or yielded to the treatment, the formation of the cataract went on undisturbed in its slow and steady progress. In some cases the cataract, as long as I had a chance to observe them, remained stationary. In two or three cases the opacities seemed for a time to retrograde, but the patients, thinking themselves, perhaps, cured, disappeared from my hands and their further history is not in my possession.

More recently J. H. Woodward, of New York, read a paper before the New York State Medical Association, in which he reported thirty-seven cases of cataract in which he thought that by his management he had at least retarded the progress of the opacity. This management he sums up in the following words: "To do what was possible to maintain, within the limits compatible with health, the nutrition of a structure not itself provided with blood vessels. In order to accomplish this purpose it is necessary to provide for the well-being of the general economy, as well as to establish a proper régime for the organ itself." From his experience with these cases he draws the conclusions that "(1) in the natural course of senile cataract there is *not* a progressive loss of vision; (2) that improvement of vision in such cases is often observed; and, (3) that complete cataractous degeneration of the senile type is a process often requiring many years for its consummation."

While, then, in his cases this complete cataractous degeneration has not yet been consummated, it is very likely that, if Woodward and his patients live long enough, the time will come when even in these thirty-seven cases this state will be reached. In relying so firmly on his method of management of these cases, while it in itself is rational and probably the best that can be given, he is, I am afraid, in a similar position in which some twenty years ago Neftel, of New York, found

himself (*Medical Record*), who was firmly convinced that he had not only retarded the progress of some cataracts, but even cured some by the application of the constant electric current. He discharged his patients as cured and other ophthalmologists removed their cataracts. Thus are we ever prone to believe that which we wish for.

Still, there are undoubtedly rare cases in which beginning opacities of the crystalline lens clear up again and disappear. I have had occasion to see this in a case in my immediate family, where a number of very decided and easily visible striæ of opacity have appeared in the peripheral cortex of both lenses and disappeared gradually under treatment for dropsy of the lower limbs due to an obscure cause, but probably an abdominal tumor. After the disappearance of these opacities the lenses were again apparently normal.

Seegen and Gerhardt have seen similar occurrences in diabetics, so has Nettleship. Such a case observed by Nicati showed at the same time a high degree of myopia and this author explained this myopia by imbibition with aqueous humor through the lens-capsule. Schmidt-Rimpler, in commending on the case (*Berliner Klin. Wochenschr.*), thinks this explanation to be the wrong one, yet as long as no other is offered, it seems to me to be the most plausible one.

In traumatic cataracts, especially in cataracts due to a contusion of the eyeball, the disappearance or at least the decrease of the visible opacities has undoubtedly been repeatedly seen by every ophthalmologist of experience.

A comparatively more frequent method, by which Nature, unaided by us, can and does bring about a cure of cataract, is by gradual over-ripening and softening of the cortical substance by imbibition, afterwards followed by its solution and gradual absorption through the intact lens-capsule. When the first cases of such a spontaneous cure were reported, in 1885 to the Heidelberg Ophthalmological Society, by Brettauer, they were looked upon as very doubtful by the majority of ophthalmologists. Yet, such observations have since steadily grown in number, so that Natanson, of Warschau (*Zehender's Monatsbl.*), in April, 1898, could already refer to about fifty, including his own. These had been reported by Brettauer, Czermack, Higgins, Lang, Mitvalsky, Robinson, Nordmann, Panas, von Wecker, Gardner, Schneidemann, Schramm, Eg-

bert, von Hippel, Delbès, Bitzos, Baquis, Krükow, Natanson, and myself. To these in October, 1898, *Berl. Klin. Wochschr*), Schmidt-Rimpler has added two more.

Absorption of the lens after rupture of its capsule either by the hand of the operator as in the operation of discission, or by a penetrating injury is, of course, not referred to in these cases. They are all cases of spontaneous absorption of a cataractous lens (chiefly their cortex) through a macroscopically intact lens-capsule. In such cases we must assume that the cataract, not having been operated upon when in a state of ripeness, has progressed by further degeneration of the lens-tissue to the Morgagnian state, that is to softening and liquifying of the cortex and that this fluid cortex has in some manner become absorbed. The final result as far as observed has been, that the anterior and posterior lens-capsule were found collapsed, and enclosed between them, usually in the lower part of the otherwise empty capsular sac, lying a small nucleus, which, too, in some cases, showed sigas of arrosion. In a few cases even this remnant of a nucleus was absent and nothing but the collapsed lens-capsule was found lying in the pupillary area as a wrinkled grayish membrane, more or less transparent, sometimes showing small flakes and crystals of lime. Sometimes a partial free pupil had resulted from a tear in the suspensory ligament. In such cases, then, after a period of blindness due to ripe cataract, a gradual improvement of vision which may attain a very high degree takes place by means of the gradual melting away and absorption of the tissue which we otherwise remove by operation. It takes usually from ten to twelve years to accomplish this. The vision so obtained would on an average, perhaps, be better still, were such cataracts less frequently complicated with other eye diseases. The most frequent complication, thus far observed, has been glaucoma. With regard to the pathology of these cases but little is known. Mitvalsky states, that with the microscope he could not detect a single cellular element in the remaining capsule and von Hippel found only very few epithelial cells and these took up stains very badly. In one case of my own I found no cells in the lens-capsule but a great many droplets of Morgagnian fluid which had not yet become absorbed.

Last year I had occasion to see another manner of spontaneous cure of a traumatic cataract, which, however, had pre-

viously been described by others. An eye had been injured by a minute flake of iron which, having pierced the cornea and iris, entered the lens-capsule and caused a traumatic cataract. The attendant inflammation subsided under my care and finally a quiet eye with good perception and projection of light resulted. This cataract progressed and I expected to extract it at no distant date, when one day the patient came to tell me that he had suddenly recovered his sight. I found some rusty-colored lens-substance lying at the bottom of the anterior chamber which had escaped fram the capsule by means of a large tear which started from the original wound in the capsule and ran across the pupillary space to its opposite periphery. There was but very little lens-tissue left in the collapsed sac and his vision with a correcting glass was fair.

From the foregoing it is clear that spontaneous retardation in the development of a cataract, temporary improvement of vision, disappearance of certain opacities, absorption of most of a cataractous lens through the uninjured lens-capsule, even the evacuation of a cataract by the bursting of the capsule are facts known to occur. Indeed they occur frequently enough to allow the ignorant now and then to point to an apparent or real cure of a cataract without operation and thus to give apparent strength and support to the claims of the wily quack.

We learn, however, something more from these observations and that is, that in cataract as in a good many other pathological conditions, we should not be too hasty in making the patient aware of his trouble and if we must let them know, not to give too definite an opinion as to the time it is likely to take until the cataract will be ready for operation. Thus we will save our patient some of the attendant anxiety and ourselves sometimes a feeling akin to that of the weather prophet when the bright sun shines instead of the cloudy weather he predicted. And as to the patient—well, he will keep on going to the quack and swearing that his medicine has done him good, even if you have afterwards occasion to extract his ripe cataract.

# OBSERVATIONS ON THE USE OF PROTARGOL IN DISEASES OF THE EYE.

BY PROF. DR. BOL. WICHERKIEWICZ, CRACOW.

AMONG the various silver preparations the best is undoubtedly protargol, and to Neisser belongs the great credit of having first tested and recommended this remedy.—(*Dermat. Centralblatt*, October, 1897).

Since then others, Darier,[1] Deneffe,[2] Roose,[3] Bossalino,[4] Ginestous,[5] Fuerst,[6] etc., have employed this remedy with more or less good results. The writer has also made use of protargol, first in the form of a 5 and later of 10 and 20 per cent. solutions in the treatment of acute granular and catarrhal conjunctivitis, but found that the results obtained were not especially noteworthy. His second series of experiments related to ulcers of the cornea. In cases in which the ulcers were of infectious character, and especially those due to gonorrhœal conjunctivitis, a distinctly favorable influence was derived from protargol in 5 per cent. solutions in connection with the treatment directed to the primary diseases. When, however, the ulcers were of metastatic character, or due to other causes, the curative effect of the drug was not especially marked.

The third series of experiments was made in cases of suppuration of the lachrymal sac. This is an affection in which the remedy has proved of signal service. Cases which had previously been treated without success by means of various customary methods for a number of months, were greatly im-

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[1]Darier—The New Silver Salts and Their Application in Ophthalmia. Ophthalmologische Klinik, No. 5, 1898.

[2]Deneffe—Protargol in Ophthalmology. Bulletin de l'Academie Royale de Belgique, 26, February, 1898.

[3]Roose—Protargol in Ocular Therapeutics. Annales de l'Institute Saint-Antoine à Coutrai, April, 1898.

[4]Bossalino—Riforma Medica, No. 5, 3, 1898.

[5]Ginestous—Gazette hebdomadaire des Sciences medicale de Bordeaux, May 15, 1898.

[6]Fuerst—Fortschritte der Medicin, No. 4, 1898.

proved or cured under the protargol treatment within a short time.

The treatment was as follows: After the lachrymal canal had been split open sufficiently to permit of the easy introduction of a fairly large canula of a lachrymal syringe, the lachrymal sac was irrigated with boric acid solution until the returning stream of water was clear, and then with the same syringe a 10 to 20 per cent. protargol solution was slowly injected. The previous cleansing of the mucous membrane of the lachrymal sac is of the greatest importance, in order to derive the full effect from the remedy and facilitate its deep penetration into the tissues of the mucous membrane. Even a single thorough application of protargol has produced a marked improvement in such cases. The secretion, which previously had been purulent, now assumed a mucous character and decreased in quantity, the improvement continuing under the same treatment, and being especially rapid in cases in which it was pos sible to make the injections twice daily. The treatment, however, must not be interrupted too soon, and not even at the time when the secretion has ceased, as otherwise recurrence is apt to take place. It is, therefore, advisable to continue the treatment for eight to fourteen days after the arrest of any discharge.

After the lachrymal mucous membrane has been so influenced by the protargol injections that the secretion loses its purulent character, a mucous discharge not infrequently persists, and examinations with the sound reveal a swelling of the lining membrane of the entire lachrymal apparatus. In such cases it is necessary to employ instead of, or in connection with protargol, astringent solutions (zinc sulphate, copper sulphate and copper aluminate) of a strength of $^1/_2$ to 1 per cent. If, under this treatment, the swelling of the mucous membrane decreases, then it not seldom happens that the previous occlusion of the nasal lachrymal duct disappears.

In my fourth series of experiments relating to specific ophthalmic blennorrhœa of the new-born and of adults, protargol has not been surpassed by any other remedy. The results, indeed, were so striking, that I am forced to regard protargol as a sovereign remedy in this form of blennorrhœa, and I am enabled to enthusiastically confirm the statement of Neisser, that "all the brilliant expectations which

have been theoretically entertained with regard to protargol have been completely realized in practice."

The method adopted by me was as follows: After the conjunctival sac had been thoroughly irrigated with boric acid solution or sterilized physiological salt solution, the upper lid was fully everted, so that the entire canthus was brought to view. This exposed conjunctival surface was then mopped with a pledget of cotton soaked in a 20 per cent. protargol solution. The same procedure was carried out in the lower eyelid. A 3 per cent. boric acid, or 1–10,000 sublimate salve was then applied between the lids and ice compresses ordered —if they were well tolerated. Besides this a 1 per cent. protargol solution was instilled by the attendant or members of the family every two hours. Under this treatment the discharge rapidly decreases, and above all loses its purulent character. The marked swelling of the lids visibly diminishes and the conjunctival mucous membrane, which previously was greatly swollen and had presented a greyish appearance, rapidly returns to a normal condition. While previously it had been difficult to separate the lids, the patient is able to open the eyes freely after a few days. In cases which came under the treatment at an early date, corneal ulcers never appeared, and if they had formed before adopting the treatment, they became rapidly clean and as a rule ceased to spread.

One of the reasons why the remedy was so well tolerated by the patients is, that its application is unattended with pain, a point in which it appears to advantage in contrast with nitrate of silver.

It is worthy to note here that cases of argyrosis of the conjunctiva were never observed.—(*Die Ophthalmologische Klinik*, No. 18, 1898).

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## CONCERNING THE FINAL RESULTS OF THE OPERATIVE TREATMENT OF MYOPIA.

BY DR. O. SCHEFFELS, KREFELD.

SINCE Fukala's first communication in 1890 on the operative treatment of high-grade myopia, whole series of hundreds of cases of such operations have been published and

there are to-day probably but few ophthalmologists who still refuse to perform this operation and therefore have not gained some experience in this field which is so highly interesting and so full of responsibility.

I am of the opinion that these, partially very extensive, reports of series of cases show a remarkable deficiency in this point, that they give only the immediate conditions following the operations and make no statements as regards the later behavior of these eyes. According to my experience, however, these operated eyes still undergo certain changes in the course of the following years, which I do not find reported in literature.

Four and a half years ago I performed my first myopia operation; a few weeks ago the fifteenth. They all took a very satisfactory course, so that I am as contented with the results as were the operated patients. I have taken particular pains to keep every one of these patients under observation until to-day and at intervals of about six months I have been able to examine the condition of each of these eyes. This would, of course, be impossible in a large clinic, where patients come from all sides and again disappear.

Although my series of observations is small, it is at least continuous and uniform.

The prime question, whether, after the operation the myopia does really not progress, is certainly the most interesting, if not the most practical, one concerning the whole operative treatment of myopia. This question to-day is yet an altogether open one. It can, of course, be decided definitely only after a longer period and by means of a very large material far observation. Yet, I think, that we are already in the possession of observations, which afford us certain points from which to form a judgment. In my opinion it is very interesting to know the experiences which cover a space of from two to four years after the completion of the whole operative procedure, that is, after the total absorption of the lens and the formation of an absolutely clear pupil. The first ten of my fifteen cases fulfill these conditions. I desire to report shortly on these ten cases, concerning eight patients, and in order to avoid being dilatory I shall in this report mention only such facts as are of interest in the question as put.

Diverse authors have set the lowest limit for operative in-

terference at 15 D. In reporting the cases of myopia of a lesser degree, in which I operated, I have shortly given my reasons for doing so. In answer to the question, whether to operate on one or both eyes, I consider, that on general principals binocular operation is the more desirable on account of the high degree of anisometropia. Yet, this point must be decided on for every case individually, since it may be necessary to preserve the myopia in one eye in order to retain good near vision. On the other hand, we may well be guided concerning this point by the wishes of intelligent patients.

CASE I.—Lady, aged 17 years; R. E. 20 D. Temporal conus, $1^1/_2$ papillæ in width, moderate lack of pigment in the circum-papillary choroid; parallactic movement of the nasal retinal vessels plainly seen.

Operations: January 20, 1894, discission. January 26, linear extraction. February 20, discission. March 15, pupil perfectly clear, not a trace of opacity. This remains unchanged until spring, 1878, when a fine secondary cataract is formed. April 21, 1898, discission. April 23, pupil again perfectly clear.

Vision: January 19, 1894, with — 20 D. V.$=^5/_L$; Nieden I at 5 cm. March 15, 1894, with + 0.5 D. V.$=^5/_{XX}$; Nieden I at 25 to 35 cm. with + 4 D. April 25, 1898, E. V.$=^5/_{XX}$; Nieden I at 25 to 35 cm. with + 3 D. Ophthalmoscopic condition unchanged. Diminution of refraction in four years = 0.5 D.

CASE II.—Boy, aged $13^1/_2$ years; R. E.=14 D. Apprenticed to a harness maker, dismissed by his master as utterly unfit. Later on, perfectly fit for harness-making, he urgently desires the operation on the other eye. Small temporal conus; fundus albinotic.

Operations: August 15, 1894, discission. August 23, linear extraction. September 20, pupil perfectly clear; remains so until May 1, 1898.

Vision: August 14, 1894, with — 14 D. V.$=^5/_L$; Nieden at 7 cm. September 20, 1894, with + 3 D. $\frown$ + 1 D. cyl. V.$=^5/_{XX}$; Nieden VI at 25 to 30 cm. with + 6 D. $\frown$ + 1 D. cyl. May 1, 1898, with + 1.5 D. $\frown$ + 1 D. cyl. V.$=^5/_{XV}$; Nieden I at 25 to 30 cm. with + 5 D. $\frown$ + 1 D. cyl. In three and a half years decrease of hypermetropia = 1.5 D. Ophthalm. stat. id.

CASE III.—Laborer, aged 25 years, L. E., 12 D. About to lose his job of turning in a machine factory on account of unsatisfactory work. Regains full working faculty using the

operated eye for work, the unoperated one occasionally for exact near vision. Temporal conus $1^1/_2$ papillæ in width; oblique position of papilla; diffuse lack of pigment.

Operations: September 3, 1894, discission. September 17, linear extraction. September 9, discission. November 2, pupil perfectly clear and remains so until May 8, 1898.

Vision: September 2, 1894, with — 12 D. V.=$^5/_X$; Nieden I at 9 cm. November 2, 1894, with + 4.5 D. ⌒ + 1 D. cyl.= $^5/_X$; Nieden I at 20 cm. with + 9.6 D. May 8, 1898, with + 4.5 D. ⌒ + 1 D. cyl. = $^5/_X$; Nieden with + 9.6 D. at 20 cm. No decrease of hypermetropia in three and a half years. Ophthalm. stat. id.

CASE IV.—Lady, aged 37 years, R. E., 16 D., macula corneæ. Large ring-shaped conus; extensive choroiditic foci like areolar choroiditis; the well-known glistening white streaks in the macula, reminding one of cracks in an enameled surface; no vitreous opacities.

Operations: December 5, 1894, discission. December 22, linear extraction. January 17, 1895, iridectomy on account of increased tension. February 6, discission. March 1, pupil perfectly clear and remains so until May 1, 1898.

Vision: December 4, 1894, with — 16 D. V.=$^5/_L$; Nieden VII at $5^1/_2$ cm. March 1, 1895, with + 2.5 D. V.=$^5/_L$; Nieden VIII at 28 cm. with + 6 D. May 1, 1898, with + 2.5 D. V.= $^5/_L$; Nieden VI at 28 cm. with + 6 D. Functional and ophthalmoscopic status idem after three and a half years.

CASE V.—Girl, aged 15 years, R. E. 18 D. Small, well defined, ring-shaped conus; albinotic fundus; on the nasal side shadow of the retina visible.

Operations: January 2, 1895, discission. January 9, linear extraction. January 14, puncture of anterior chamber on account of increased tension. February 2, discission. March 1, pupil perfectly clear and remains so until May 2, 1898.

Vision: January 1, 1895, with — 18 D. V.=$^5/_L$; Nieden I at 6 cm. March 1, 1895, with + 1.75 D. V.=$^5/_{XV}$; Niden IV at 25 to 35 cm. with + 5 D. May 2, 1898, with + 0.5 D.=$^5/_{XX}$; Nieden I with + 4.5 D. Decrease of hyperopia after three years = 1.25 D. Ophthalm. stat. id.

CASE VI.—Lady, aged 18 years, R. E., 14 D.; same as Case I, urgently demands operation of the other eye. Well

defined, ring-shaped conus, 3 papillæ in width; blood vessels straightened; decided lack of pigment.

Operations: January 2, 1895, discission. January 9, linear extraction. February 27, discission. March 15, pupil perfectly clear. Three months later, slight secondary cataract. July 2, discission; pupil perfectly clear and remains so until May 3, 1898.

Vision: January 1, 1894, with — 14 D. V.=$^{5}/_{L}$; Nieden I at 8 cm. March 15, 1895, with + 2 D. ⌒ + 2 D. cyl. V.=$^{5}/_{X}$; Nieden I with + 6 D. ⌒ + 2 D. cyl. at 12 to 50 cm. May 3, 1898, with + 1 D. ⌒ + 1.5 D. cyl. V.=$^{5}/_{7.5}$ to $^{5}/_{V}$; Nieden I at 12 to 50 cm. with + 5 D. ⌒ + 1.5 D. cyl. Decrease of hyperopia in three years = 1 D. Ophthalm. stat. id.

Case VII.—Boy, aged 14 years, L. E., 12 D., same as Case II. Both the boy and his parents urgently desire to have the other eye operated. Temporal conus, $1^{1}/_{2}$ papillæ in width; moderate lack of pigment.

Operations: May 2, 1895, discission. May 20, linear extraction. June 15, discission. July 10, absolutely clear pupil. Spring, 1898, fine secondary cataract for which I shall soon operate again.

Vision: May 1, 1895, with — 12 D. ⌒ — 4 D. cyl. V.=$^{5}/_{XXV}$; Nieden I at 7 cm. July 10, with + 4.5 D. V.=$^{5}/_{XX}$; Nieden III at 20 cm. with + 8 D. April 15, 1898, with + 3 D. V.=$^{5}/_{XV}$; Nieden III at 20 to 30 cm. with 6.5 D. Decrease of hyperopia in two and a half years = 1.5 D. Ophthalm. stat. id.

Case VIII.—Boy, aged 8 years, L. E. 10 D. Had to be dispensed from school on account of continued severe accommodative asthenopia and general nervosity; afterwards was free from headache and could go to school. Small temporal conus; great lack of pigment; a choroidal exudation of $1^{1}/_{2}$ papillæ in diameter in the macula which had appeared six months previously and grown rapidly in spite of inunctions, Heurteloup and rest; no vitreous opacities.

Operations: June 15, 1895, discission. June 22, linear extraction. August 24, pupil perfectly clear; remains so until fall, 1897, when a secondary cataract was formed, the removal of which was postponed until school-vacation.

Vision: June 14, 1895, with — 10 D. ⌒ — 2 D. cyl. V.=$^{5}/_{XXV}$; Nieden I at 10 cm. August 20, with + 5.5 D. V.=$^{5}/_{XV}$: Nieden III at 26 cm. with + 9 D.; after a year Nieden I.

April 16, 1898, with + 3.5 D. V.=$^{5}/_{L}$, secondary cataract; Nieden VIII with + 7 D. Decrease of hyperopia in two and three-fourths years = 2 D. The chorioretinitic focus is a third smaller than before; no new changes in the fundus.

CASE IX.—Laborer, aged 39, L.E. 14D. Is to lose his job as dyer on account of unsatisfactory vision, which is rendered perfectly satisfactory by the operation and later on urgently desires operation on the other eye. Well defined, ring-shaped conus; papilla very oblique; blood vessels straightened; considerable atrophy of pigment.

Operations: January 25, 1896, discission. February 2, linear extraction. February 10, discission. March 15, discission. April 15, pupil perfectly clear; remains so until spring, 1898, when secondary cataract appears. April 23, 1898, discission.

Vision: January 24, 1896, with — 14 D. V.=$^{5}/_{XX}$; Nieden I at $7^{1}/_{2}$ cm. April 15, with + 2 D. ⊂ + 1.5 D. cyl. V.=$^{5}/_{XVI}$; Nieden I at 25 to 30 cm. with + 6 D. ⊂ + 1.5 D. cyl. May 3, 1898, with + 1 D. ⊂ + 1 D. cyl. V.=$^{5}/_{XV}$; Nieden I with + 5 D. Decrease of hyperopia in two and and one-fourth years = 1 D. Ophthalm. stat. id.

CASE X.—Boy, aged 10 years, L. E. 12 D. Sees unsatisfactorily in school and is utterly unfit to help in his father's business as decorator. Both boy and parents are greatly pleased with the result of the operation.

Operations: February 17, 1896, discission. March 1, linear extraction. April 20, pupil perfectly clear; one and one-fourth years afterwards, fine secondary cataract. July 9, 1897, discission; pupil again clear and remains so until May 3, 1898.

Vision: February 16, 1896, with — 12 D. V.=$^{5}/_{L}$; Nieden I at $8^{1}/_{2}$ cm. April 25, with + 4.5 D. V.=$^{5}/_{XX}$; Nieden I at 26 to 32 cm. with + 8 D. May 4, 1898, with + 3 D. V.=$^{5}/_{XV}$; Nieden I with + 7 D. Decrease of hyperopia in two years = 2.5 D Ophthalm. stat. id.

The fact that by means of this operation the visual acuity is considerably increased, which had already been sufficiently proven by the hitherto published larger operative statistics, is confirmed by my report. In addition it shows, furthermore, the gratifying fact, that in six cases this improvement kept on augmenting within the next few years. Since this leads to very interesting consequences which I shall, however, not now

discuss, as I do not want to go beyond the field of real facts, I briefly repeat here the data for a better survey.

The visual acuity rose after the operations from 0.1 to 0.25 and no further; from 0.1 to 0.15 and later on to 0.3; from 0.5 no further; from 0.08 to 0.1 and no further; from 0.1 to 0.3 and later on to 0.5; from 0.1 to 0.5 and later on to 0.8; from 0.2 to 0.25 and later on to 0.3; from 0.25 to 0.3, later interfered with by secondary cataract; from 0.25 to 0.3 and later on to 0.4; from 0.1 to 0.25 and later on to 0.3.

A second fact resulting from my observations, which is little astonishing, however, is that in six of the ten cases a secondary cataract developed, although when the healing had completely taken place, the pupil had been absolutely clear and neither with a magnifying glass nor with focal illumination could the capsule be seen. She secondary cataract developed one-fourth, one and one fourth, two, two and one-fourth, two and three-fourths, and four years after the healing was finished. The secondary cataract always consisted of the well-known fine membrane which is so easily overlooked without focal illumination, shows numerous little folds and here and there thicker portions, and which in consequence refracts the light very irregularly; the same which, as a rule, sooner or later develops after cataract operations on juvenile patients, probably due to the stronger energy of growth residing in a juvenile lens.

In the five cases operated on in the last two years I have seen two more secondary cataracts from one and one and one-fourth year later and have operated for secondary cataract on two cases which had been operated by colleagues elsewhere. Thus I have found ten secondary cataracts in seventeen operations for myopia. This fact merits particular stress, since most of those operated on for myopia are juvenile individuals.

The discission in most of my cases was very simple and followed by success without irritation, interrupting the occupation of the patient for twenty-four hours only. I perform it after the manner of Pagenstecher and Kuhnt through the sclerotic using either a very thin Luer's needle or a very practical little knife with which I became acquainted last year at Kœnigsberg.

Proceeding now to an answer to the question of a further progress of the myopia after the operation, I want first to make a few remarks on the manner of my determination of the refraction.

The myopia was always determined by the correcting glass for the atropinized eye, the distance of the glass from the eye being 10 mm. The refraction of the aphakic eye was determined only after perfect healing had taken place and when the pupil was absolutely black. The distance of this glass from the eye was usually 13 mm. In order to avoid as far as possible all errors, the aphakia was repeatedly tested on different days and only perfectly certain results were noted down. Twice the same visual acuity was objectively obtained with different convex glasses, this difference reaching 1.5 D. Without paying attention to the glass which the patient preferred subjectively, the weakest convex glass was noted down.

Since all measurements were made with constant illumination and in a uniform manner, and since all of my patients possessed the intelligence necessary for a satisfactory test of their refraction, I can see no reason to doubt my statements as being the exact expression of the refraction as really existing.

In two cases only, that of Case III, a laborer, aged 24 years, with 12 D., and that of Case IV, a lady, aged 37 years, with 16 D., did I find the same optic conditions three and a half years after the operation, which had existed when the healing was completed.

In the remaining eight cases I found later on a change in the correcting glass, and there was never an increase, but always a decrease. The results, put side by side, are here repeated.

There was a decrease of hyperopia: In the lady, 17 years of age, with 20 D. after four years of 0.5 D.; the boy $3^1/_2$ years of age, with 14 D. after three and a half years of 1.5 D.; the girl, 16 years of age, with 18 D. after three years of 1.5 D.; the lady, 18 years of age, with 10 D. after three years of 1 D.; the boy, 14 years of age, with 12 D. after two and three-fourths years of 2 D.; the boy, 8 years of age, with 10 D. after two and three-fourths years of 2 D.; the laborer, 31 years of age, with 14 D. after two and a half years of 1 D.; the boy, 10 years of age, with 12 D. after two years of 1 5 D.

As there are three cases among the ten in which the second eye has up to date not been operated on, it will be interesting to compare the refraction of the unoperated with that of the operated eye.

In Case III the operated eye showed no decrease of re-

fraction after three and a half years; in the unoperated eye the refraction rose from 10 D. with $^1/_2$ visual acuity to 12 D.

In Case VIII the refraction of the operated eye decreased in two and three-fourths years 2 D.; the unoperated eye changed from — 8 D. ⌒ — 2 D. cyl to — 11 D. ⌒ — 2 D. cyl. with $^1/_4$ visual acuity.

In Case IX the refraction of the operated eye decreased in two and one fourth years 1 D.; in the operated eye the myopia rose from 12 to 14 D. with $^1/_2$ visual acuity.

The remaining cases were operated on both eyes and offer no such chance of comparison.

Reviewing the whole ten cases from this standpoint, we find that only in one-fifth of the cases the refraction remained the same as it was at the time of the operation, in four-fifths a further decrease of the hyperopia took place in spite of the operation.

My small series can, of course, not be used for generalization, since chance plays too great a rôle in such a small number of cases. Yet, the knowledge of this fact is surely interesting. At all events, I do not know how to explain my figures, if not by the increase of the axial myopia in spite of the operation by further elongation of the eyeball. By further considerating that the decrease of the convex glass of the aphakic eye by 1 D. means an increase of the myopia in the unoperated eye of 2 D., I am forced to the unexpected conclusion, that during an observation of from two to four years the operation had exerted no influence upon the increase in elongation of the eyeball in four-fifths of my cases.

This does not, of course, mean that in the future, through the much more favorable conditions for work in which these operated myopic eyes now are, a decided beneficial influence may not assert itself; for we can not expect that the inflammatory processes which cause the ectasia of the posterior pole of the eyeball should at once cease after the operation.

A moderate decrease of the refraction, however, would in most cases be beneficial, as it would render the refraction more nearly emmetropic, and emmetropia seems to result in but few cases.

Yet, even if the process of myopia should still keep on progressing in spite of the operation in a number of cases, this would not militate against the operation; on the contrary, it

would be the more indicated, as it would render the patient much better able to work than he should be without it, at least if the operation in no way injures the eye. This, however, is the most important point.

I do not think here of the danger of infection, although a number of eyes will certainly be lost by it, as we have no absolute guard against it; neither of an increase in the intraocular pressure and retinal hæmorrhages with their deleterious consequences, but of the danger of detachment of the retina which already has ruined an ominously large number after the operation and recently has influenced Schreiber to make his excellent communication on the indications of the myopia operation. It is impossible to be too careful of the vitreous body in our operations. Hirschberg accuses not only prolapse of vitreous body but also, especially, the too frequent discissions which penetrate into the vitreous body, of causing the consequent detachment of the retina and I think, that after a careful consideration of everything for and against this view we can hardly gainsay it. Above all, no discission must reach through the whole lens and the posterior capsule; neither must, at the extraction of the lens, the attempts to remove all easily reached particles of lens-substance be too persistent. These results must guide us in order to avoid injuring the vitreous body. In my fifteen cases I did not have any prolapse of vitreous body. Under no circumstances must we try to hasten the sometimes slow process at the expense of security, and it is questionable whether some recent recommendations made in order to change the technique of the operation, can be looked upon as a progressive.

It can readily be understood and is simply human, than an operator, who has seen retinal detachment follow, and especially when such accidents repeat themselves and his operative material is perhaps small, should lose his enthusiasm for the operation and inveigh against it by mouth and literature and that he, as little as his patients, should consider Fukala's operation a brilliant addition to modern eye-surgery. Yet, at present, we may still ask whether such a misfortune might not have been avoided, with a better operative technique, or if the indications had been studied more precisely.

He, who in his operations is guided not by the number of dioptrics, but especially by the inability to earn a decent liv-

ing, the employment and the age of the patient, will be better able to bear an eventual misadventure following his operation.

The same degree of myopia which renders many a laborer breadless and makes him a useless member of human society, may under the same circumstances not even inconvenience a scientist. In a boy, aged 8 years, a much smaller number of dioptrics may be an indication for operation, than in the adult in whom an operation with less than 1 D. needs a special justification. Juvenile individuals who in sharp competition have to struggle for a living, furnish other points for consideration than patients of riper years who can complacently look back upon their successes.

And, further, we all know that there are exceptional cases in which the continued wearing of even the strongest concave glasses (I have seen two patients, each with only one eye, who seemed to wear — 20 D. for a long time without discomfort) is well borne by the eyes, without causing any inconvenience to the wearer.

He, who has seen the enormously increased faculty for work and the often astonishingly increased happiness in their existence of some operated myopes, can not get rid of the thought, that Fukala's operations must lastingly maintain its blissful existence. However, it is our duty to ascertain without a doubt the best technique and the correct indications.—(*Zehender's Monatsblätter*).

## EDITORIAL NOTES.

A new journal on Ophthalmology is about to be published by S. Karger, Berlin, the editorship of which lies in the experienced hands of Professor Kuhnt (Koenigsberg), and von Michel (Wuerzburg). The prospectus contemplates original articles, clinical cases, half-yearly reports on the foreign literature, therapeutic progress and reports of societies. The list of collaborators contains twenty-three well-known gentlemen and we have no doubt this new journal has a bright future before it.

A second edition of Graefe and Saemisch's Cyclopædia is at present being published by W. Engelmann, Leipzig. The first three fascicles by Alfred Graefe have just appeared.

# CORRESPONDENCE.

## INVITATION TO THE NINTH INTERNATIONAL CONGRESS OF OPHTHALMOLOGY, TO BE HELD AT UTRECHT, NETHERLANDS, AUGUST 14 TO 18, 1899.

SIR AND HONORED COLLEAGUE—In accordance with the resolution adopted by the Eighth International Congress of Ophthalmology held in Edinburgh in 1894, the undersigned have constituted themselves a committee of organization and have the honor to invite you to take part in the Ninth International Congress of Ophthalmology, which will meet in Utrecht, Monday, August 14, 1899.

The only languages in which communications and discussions may take place are English, French or German.

In the morning there will be general sessions or meetings by sections; these latter are arranged according to the subjects which will occupy them especially. There will be:

*A*—Section of Anatomy, Pathological Anatomy and Bacteriology.

*B*—Section of Optics and Physiology.

*C*—Section of Clinical and Operative Methods.

In each section the language to be used for the communications will be decided upon, without, however, excluding absolutely the other two.

For secretaries we can count on the efficient assistance of Dr. A. McGillivray, of Dundee, for the English; Dr. August Dufour, of Lausanne, for the French; Dr. A. Siegrist, of Basel, for the German language.

The amount to be paid by each for the defraying of the general expenses and the transactions has been set at 25 francs ($5.00).

The reception committee is composed of the following gentlemen:

MR. B. REIGER, Mayor of Utrecht,

DR. jur. J. BARON, d'Aulnais de Bourouill,

DR. jur. J. C. N. VAN EYSE VAN LIENDEN,

DR. A. A. V. HUBRECHT, Professor at the University,
DR. jur. J. E. HUYDECOPER, de Maarseween and de Nigtevecht,
DR. H. SNELLEN, Professor at the University.

In order to be able to take the necessary measures in time, we beg you to announce as soon as possible to the last of the undersigned whether we can count on your participation in the Congress and whether you will be accompanied by your ladies, etc. * * *

We beg of you also to let us know which language you should prefer to use in the discussions. Members, who intend to make a communication are asked to give us the title at once. * * *

Utrecht, December, 1898.

D. ARGYLE ROBERTSON, President Eighth Int'nl Congress,
G. A. BERRY, Secretary Eighth Intn'l Congress,
M. E. MULDER, Professor University of Groningen,
M. STRAUB, Professor University of Amsterdam,
W. KOSTER, Professor University of Leyden,
H. SNELLEN, Professor University of Utrecht.

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## PAMPHLETS RECEIVED.

"Artistic Breathing," by G. H. Makuen, M.D.

"Remarks on Hydrophthalmos," by J. M. Ball, M.D.

"A Case of Quinine Amaurosis," by J. M. Ball, M.D.

"Antisepsis and Antiseptics," by Ch. M. Buchanan, M.D.

"Foreign Bodies in the Lens," by B. Wicherkiewicz, M.D.

"Experiences with Protargol," by B. Wicherkiewicz, M.D.

"Congental Absence of the Iris," by J. A. Andrews, M.D.

"Diseases of the Ear as a Specialty," by E. Amberg, M.D.

"Recurrent Parotitis in a Healthy Child," by F. C. Ewing, M.D.

"Xeroform in Ocular Therapeutics," by B. Wicherkiewicz, M.D.

"The Climates and Health Resorts of Canada," by P. H. Bryce, M.D.

# MEDICAL SOCIETIES.

## FOURTH ANNUAL MEETING OF THE WESTERN OPHTHALMOLOGICAL AND OTO LARYNGOLOGICAL ASSOCIATION.

### CARNIVAL MEETING.

The fourth annual meeting of the Western Ophthalmological and Oto-Laryngological Association will be held in New Orleans, La., February 10 and 11, 1899, these dates having been selected in order to give the visiting members an opportunity to see New Orleans during the celebrated Mardi Gras Carnival. Reduced rates will be issued by the railroads for this occas on, return ticket from Chicago about $25.00, from St. Louis abaut $20.00, and from other localities in proportion.

### SCIENTIFIC PROGRAM.

An interesting program is being prepared and will be mailed in due time by the secretary. A full attendance is confidently expected. Prominent men have been invited to deliver the opening address to the Ophthalmological and Oto-Laryngological Sections. The meeting will be held in the New Orleans Polyclinic Building.

### ENTERTAINMENTS.

On Friday, February 10, the members are invited to a reception given by Dr. and Mrs. Scheppegrell, and on Saturday evening a number of boxes will be retained at the French Opera House for the members and the ladies who accompany them. On Monday and Tuesday the Carnival processions will be seen. Convenient places for observing these will be furnished by the Arrangement Committee. The Rex Carnival ball will take place Tuesday evening, invitations for which may be obtained by members applying to Dr. Scheppegrell, Chairman of the Arrangement Committee, New Orleans. The Arrangement Committee will also provide members with cards for the various clubs of New Orleans.

HOTEL ACCOMMODATIONS.

The hotels of New Orleans are as follows:

ST. CHARLES HOTEL (American plan)—$5.00 per day, payable from date of engagement.

HOTEL GRUNEWALD, European plan, $1.50 to $2.50; American plan, $3.50 to $4.00 per day.

HOTEL ROYAL, $2.50 to $4.00 per day.

THE COSMOPOLITAN, European plan, $1.50 and upwards per day.

HOTEL DENECHAUD, American plan, $2.50 and upwards per day.

Members are requested to address the above directly for reservation during the Carnival. In addition to the hotels there are furnished rooms in various parts of the city, a partial list of which will be supplied by the Arrangement Committee.

Owing to the demand for hotel accommodation, two special Pullman cars will probably be retained for the whole visit. Members are requested to communicate with Dr. Thomas A. Woodruff, 1102 Reliance Building, Chicago, Ill., for rates and reservation.

Members who will be present at the meeting will please notify Dr. Scheppegrell, Chairman, as soon as convenient, in order to facilitate the work of the Arrangement Committee. Titles of original communications for the meeting, and application for membership, should be sent to Thomas A. Woodruff, 1102 Reliance Building, Chicago, Ill.

OFFICERS.

President, Dr. E. J. Colburn; First Vice President, Dr. W. Scheppegrell; Second Vice-President, Dr. Casey A. Wood. Third Vice-President, Dr. H. Gifford; Secretary, Dr. Thomas A. Woodruff; Treasurer, Dr. W. L. Dayton.

COMMITTEES.

*Program*—Dr. F. M. Rumbold, Chairman; Dr. H. V. Würdemann, Dr. H. Fifford.

*Publication*—Dr. A. Alt, Chairman; Dr. Thos. A. Woodruff, Dr. M. A. Goldstein.

*Admissions*—Dr. G. Knapp, Chairman; Dr. Casey A. Wood, Dr. E. C. Ellett.

*Arrangement*—Dr. W. Scheppegrell, Chairman; Dr. Isadore

Dyer, Dr. Otto Joachim, Dr. Augustus McShane, Dr. Paul Reis, Dr. Chas. Chassaignac, Dr. Jno. Callan.

*Reception*—Dr. Chas. Chassaignac, Chairman; Dr. J. D. Bloom, Dr. E. T. Shepard, Dr. Rudolph Matas, Dr. F. Loeber, Dr. W. Brickel, Dr. Frederick Parham, Dr. Q. Kohnke, Dr. F. Formento.

### MEMBERSHIP.

The membership of this Association shall be limited to members of the regular profession, of acknowledged reputability, who shall have engaged in the practice of diseases of the eye, ear, nose and throat for at least three years. All applicants must be eligible for membership in the American Medical Association, and all applications must be endorsed by at least three members of this Association who are in good standing.

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## PRELIMINARY PROGRAM.

### OPHTHALMOLOGICAL SECTION.

DR. G. T. STEVENS, of New York, will give the address before the Section on Ophthalmology.

W. A. FISHER, Chicago—(Title not given).

W. H. BAKER, Lynchburg, Va.—Retinoscopy.

J. ELLIS JENNINGS, St. Louis—(Title not given).

A. ALT, St. Louis—The Pathology of Cataract.

J. R. ROBINSON, Colorado Springs—(Title not given).

S. S. LEDBETTER, Birmingham, Ala.—Keratitis Herpetica.

H. H. BROWN, Chicago—The Etiology and Importance of Iritis.

W. E. DRIVER, Norfolk, Va.—Best Vision After Cataract Extraction.

E. E. HAMILTON, Wichita, Kans.—Refraction of Trachomatous Eyes.

R. F. LEMOND, Denver, Colo.—Ulcerative Keratitis and How to Cure It.

H. I. MCMORTON, Minneapolis, Minn.—A Study of Conjunctival Ulceration.

J. J. KYLE, Marion, Ind.—An Ophthalmologist's Experience with the Army.

ELLET O. SISSON, Keokuk, Iowa—Injuries of the Eyeball, with Report of Cases.

HAMILTON STILLSON, Seattle, Wash.—Some Experiments With the Giant Magnet.

A. R. AMOS, DesMoines, Iowa.—Luxation of Both Lenses Giving Rise to Glaucoma.

G. A. WALL, Albuquerque, N. M.—Retinal Detachment, Loss of Vision, Recovery.

K. K. WHEELOCK, Fort Wayne, Ind.—Congenital Arrest of Development of the Cornea.

CASSIUS D. WESCOTT, Chicago—Some Experiences With Dr. Gould's Method of Prismatic Exercises.

B. E. FRYER, Kansas City, Mo.—Profuse Hæmorrhage Subsequent to Extraction of Senile Cataract.

E. C. ELLET, Memphis, Tenn.—Series of Cases of Malarial Keratitis With Reports of blood examinations.

CASEY A. WOOD, Chicago—Glioma of the Medulla, With Report of Autopsy and Microscopical Examinations.

J. A. MULLEN, Houston, Texas—The Percentage of Color-Blindness to Normal Color-Vision as Computed from 308,910 Cases.

L. R. CULBERTSON, Zanesville, Ohio—Case of Bell's Palsy and Epilepsy Cured by Correction of Ametropia and Heterophoria.

GEORGE F. KEIPER, Lafayette, Ind.—Treatment of Diseases of the Lachrymal Duct by Cataphoresis with Exhibition of Cupped Sounds.

H. V. WUERDEMANN, Milwaukee—A Report on Operative Treatment of High Myopia. Discussion by CASEY A. WOOD, of Chicago, and B. E. FRYER, of Kansas City, Mo.

DUDLEY S. REYNOLDS, Louisville, Ky.—Treatment of Acute and Chronic Glaucoma. Discussion by JOHN F. FULTON, of St. Paul, ond CHARLES W. KOLLOCK, of Charleston, S. C.

JAMES M. BALL, St. Louis—Large Tumor of the Brain Encroaching on the Motor Area and Causing Few Symptoms Save Optic Neuritis, With Remarks on the Value of Double Neuritis as a Sign of Brain Tumor.

# PROCEEDINGS OF THE OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

H. R. SWANZY, F.R.C.S.I., President, in the Chair.

CLINICAL EVENING.

THURSDAY, DECEMBER 8, 1898.

## RENAL RETINITIS.

MR. NENTLESHIP showed a microscopical drawing. Pigmentation of the retina was known to occur in cases of renal retinitis where the disease was either severe or of long standing; it was generally seen near the periphery, but if the case lasted long enough it was found near the disc. The case from which the drawing had been taken had been observed during life, and the pigmentation had been noted. After death the eyes had been examined. A number of oval or round cells, with amorphous *débris*, the remains of an inflammatory exudation, were found in the retina between the bacillary layer and the hexagonal pigment layer in different places; these foci contained pigmented cells derived from the pigment epithelium, probably by proliferation.

## SYMPATHETIC OPHTHALMIA BEGINNING FOURTEEN DAYS AFTER EXCISION OF THE INJURED EYE.

MR. HOMES SPENCER showed a boy, aged 10 years, who was struck in the left eye on July 4 by a piece of sardine tin; there was a jagged wound of the cornea not involving the ciliary region; the anterior chamber was filled with blood, and the deeper parts could not be seen. A week later a piece of entangled iris was removed from the wound by iridectomy; the lens was found to be wounded. The eye remained painful and much congested and iritis set in, and it was excised on July 25, three weeks after the injury. The patient remained in hospital until August 6. Two days later there was slight ciliary injection of the right eye, fourteen days after excision. He was taken into hospital again: T. was — 2, V.=$^{7}/_{XXVI}$; the pupil was well dilated; there was no deposit on the back of

the cornea; there was much floating matter in the anterior part of the vitreous; there was no optic neuritis. He was treated with atropine and mercurial inunction. The tension had now become normal, and the vision was $^{6}/_{IX}$.

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### An Unusual Form of Marginal Keratitis.

Mr. John Griffith and Dr. Blair showed a case. The condition had existed for several years, and was associated with eczema of the face; the keratitis was symmetrical, attacking the inner and outer margins of each cornea close to the limbus. The lesions were slightly raised, vascular, and in three out of four limited by a curved line of opacity. It bore some resemblance to phlyctenular keratitis, but its persistence, absence of ulceration, and want of symptoms excluded this disease. It resembled spring catarrh, but the palpebral conjunctivæ were quite healthy.

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### Pulsating Exophthalmos With Visible Tumor.

Mr. W. J. Cant showed a man, aged 36 years, who was kicked on outer part of the left eyebrow eight years ago. Eighteen months ago he had pain over the right eyebrow with vomiting; the sight became dim, and he had diplopia. Gradually a swelling appeared at the upper inner angle of the right orbit, and he was conscious of a loud whistling sound in the head; as the swelling increased the sight returned and the diplopia ceased. R. E. V.=$^{6}/_{VI}$ J. 1, proptosed 8 mm. There were large tortuous veins on the ocular conjunctiva, a pulsating movable tumor diminished by pressure on the carotid; a loud *bruit* could be heard over the region of the tumor. There was no diplopia; the pupil acted normally; the retinal veins were enlarged, tortuous, and pulsating. He had been treated with rest, low diet, iodide of potassium, and digital compression with considerable benefit.

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### Symmetrical Choroiditis in the Early Stage.

Mr. Hartridge showed a man, aged 23 years, who first had dimness of sight five months ago; the sight had been progressively failing since. Family history good; personal health good; no history of syphilis. V., R.=$^{6}/_{XXVI}$, L.=$^{6}/_{XII}$. Both optic discs swollen and blurred; a large choroidal hæmorrhage

on the outer side of each disc, œdema of the retina over the whole central region, with a number of small circular exudations in the superficial layers of the choroid; urine normal.

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### Atrophy of the Choroid With Sclerosis of the Choroidal Vessels.

Mr. Ernest Clarke showed a man, aged 53 years, who first attended the City of London Ophthalmic Hospital four years ago with the history that his sight had been gradually failing for a year. He had been a heavy drinker and had syphilis. He had well-marked optic neuritis in both eyes, and vision was reduced to figures at a meter in both eyes; there was no history of night-blindness. The following changes had been gradually comin5 on since then, and the present condition of the eye was: Atrophy of the optic nerve and retina, atrophy of the epithelial pigment and of the chorio-capillaris, which allowed the vessels in the tunica vasculosa to be well seen; sclerosis of many of the choroidal vessels, especially on the temporal side of the posterior pole of each eye. The periphery of the retina showed pigmentation like that of retinitis pigmentosa. Large flocculent vitreous opacities. Vision reduced to p.l.

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### Myxosarcoma of the Orbit.

Mr. Juler showed a female, aged 20 years, who first had diplopia in May, 1897; in February, 1898, the left upper lid began to droop and the eyeball was turned downwards and proptosed; the displacement of the eye increased until June 15, when there was marked ptosis and proptosis, the movements of the globe being limited. The tumor was soft and fluctuating, but contained two hard nodules. The skin of the face sprinkled with brown and blue pigment spots which had always been present. On June 25 the contents of the orbit were evacuated after puncture by a trocar and canula had given exit to several drachms of clear gelatinous fluid which came from a cyst in the growth. After removal the bone of the roof of the orbit was found eroded, and an aperture led to the dura mater. Last month there was a recurrence beneath the upper lid. Microscopically the tumor presented the appearances of a myxoma, but the invasion of the frontal bone

and the recurrence indicated that it was probably sarcomatous. It consisted of stellate branching cells, round cells, and blood vessels; within the meshes of the tissue was a large amount of mucin.

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### Congenital Absence of Choroid.

Dr. Tatham Thompson showed a man, aged 18 years, with V.=$^{20}/_{cc}$, a dazzling white sclera being seen all over the fundus except at the macula; there were a few isolated choroidal vessels only.

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### Tumor of Iris.

Mr. A. H. Thompson showed a small tumor, probably a sarcoma, projecting from the anterior surface of the iris.

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### Injury to Cornea.

Mr. W. H. Jessop showed a case. A large flap turned back from the upper margin of the cornea had become reapplied and united.—(*British Medical Journal*).

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## BOOK REVEIWS.

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A TREATISE ON UNRIPE CATARACT. By W. A. McKeown, M.D., M.Ch. Illustrated by nine plates containing sixty original drawings. 1898. Price, 12/6d. London: H. K. Lewis, Publisher, 136 Gower St., W. C.

The author, who in 1884 introduced irrigation of the anterior chamber for the removal of lens substance in cataract extraction, gives in this voluminous book his large experience with this method as especially adapted to the removal of "unripe" cataracts. He confines himself to the report of his own work on which he is surely to be congratulated. Among his conclusions we may mention that irrigation is more efficient in removing cortex than any other method; that it restores tone to a collapsed cornea and supplies the want of aqueous humor; that in incomplete cortical cataract the zonule of Zinn being usually strong the conditions are particularly favorable for safe irrigation; that secondary operations form a small percentage.

Finally, he advocates iridectomy in cataract extraction. The book is worthy of a careful study. Print and illustrations are of the best.

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LA VISION—ETUDE PHYSIOLOGIQUE. (VISION—A PHYSIOLOGICAL STUDY). By H. PARINAUD, M.D. Illustrated. 1898. Price, 6 francs. Paris: Octave Doin, 8 Place de l'Odéon.

This is an exceedingly interesting and important work in which the author develops a new explanation of the the phenomena of vision by the known anatomical facts, the clinical observation and the theory of evolution. He does not hesitate to state that the philosophical, psychological and mathematical methods of explanation have not done much more than envelop the whole question of vision in an impenetrable mist. The book aims at, and we think the author has succeeded to a marked degree, a more simple and physiological explanation of all the phenomena of vision. It is most interesting reading and should be studied by all. Print and makeup are excellent.

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THE CRYSTALLINE LENS SYSTEM. ITS EMBRYOLOGY, ANATOMY, PHYSIOLOGICAL CHEMISTRY, PHYSIOLOGY, PATHOLOGY, DISEASES, TREATMENT, OPERATIONS, AND AFTER-CHANGES, With a Consideration of Aphakia. By LOUIS STRICKER, M.D. Cincinnati, Ohio. 1899. Sold by subscription at $5.00.

The book, dedicated to the memory of Otto Becker, is a translation of Becker's part in Graefe and Saemisch's Cyclopædia enlarged up to the times. It gives an elaborate and extensive exposé on all that is known at present concerning the lens. The author has added to the bibliography given by Becker enough of that of more recent years to make the bibliography take up no less that 166 pages and yet it can hardly be called complete. It is a pity the book is so full of misprints, in the future edition the author should take care to remove them. The book is of special interest to those unable to read Becker's original volume, or the one in the second edition of Graefe and Saemisch just now appearing in print. ALT.